REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 1, 2, 4-9, 11-16, 18-24, 26-31, 33-38, and 40-49 are pending in this

application. Claims 3, 10, 17, 25, 32, and 39 are canceled by the present response without

prejudice, and new dependent claims 47-49 are added by the present response. Claims 1-46

were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. patent 5,970,504 to Abe et al.

(herein "Abe").

Addressing the above-noted rejection of claims 1-46 under 35 U.S.C. § 102(e) as

anticipated by Abe, that rejection is traversed by the present response.

Applicants initially note the claims are amended by the present response to clarify

features recited therein. Specifically, independent claim 1 now requires an operation of

describing "a first identifier indicating a figure type of the one of predetermined approximate

figures and a second identifier indicating a function type of the one of predetermined

functions as the region data". Independent claims 8 and 15 are similarly amended as

independent claim 1. Further, independent claim 24 is amended by the present response to

clarify that trajectories of corresponding representative points or corresponding characteristic

points of successive frames are approximated "with spline functions including knots, the

trajectories of respective points between knots being approximated respective functions".

Independent claim 24 now also recites "describing information indicating the trajectories for

respective points and respective time periods between knots as the region data". Independent

claims 31 and 38 are similarly amended as in independent claim 24.

The features recited in the amended claims are believed to clearly distinguish over the

applied art to Abe.

First with respect to amended independent claims 1, 8, and 15, and the claims

dependent therefrom, the subject matter clarified therein is fully supported for example by

Figures 23 and 24 in the present specification. As recited in those claims, position data of a representative point of one of predetermined approximate figures approximating the region is extracted from a plurality of frames. A temporal trajectory of corresponding representative points of successive frames is approximated with one of predetermined functions of time. A first identifier indicates a figure type of the one of the predetermined approximate figures and a second identifier indicates a function type of the one of the predetermined functions as the region data.

As discussed in the present specification for example at page 61, line 1, to page 64, line 12, and with reference to Figure 22 in the present specification as a non-limiting example, an example of describing a trajectory of an object region that is different from the approximate data structure shown in Figures 6 and 7 is described. In Figure 22 a Figure Type ID 3900 specifies a type of figure that has been used to make the approximation of the shape of an object. For example, a centroid, a rectangle, an ellipse or their combinations can be specified. Figure 23 shows an example of types of figures and assignment of the Figure Type ID. Thus, a figure that has been used to make the approximation of the shape of an object can be identified by using an identifier of a very small number of bits (in the example provided in Figure 23 the Figure Type ID can be any of the 6 bits "0" to "5").

Further, a function approximating the trajectories of representative points of the object regions is described by using a Function Specifying Information 3910 that includes a Function ID 3911 indicating the order of a polynomial spline function and a Function Parameter 3912 indicating information for specifying a coefficient of the polynomial spline function.

Figure 24 shows such examples. Note that in Figure 24 ta and tb are times of continuous knots, f(t) is a spline function in a region [ta, tb] and fa and fb are coordinates of the knot at time ta and tb. Since information about the knot is sufficient information when a

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linear polynomial is employed, no function parameter is described. When a quadratic

polynomial is employed, one value is described in the function parameter as information for

identifying the coefficient.

Thus, a function approximating trajectories of representative points of an object

region can be identified by using an identifier of a very small number of bits (the Function ID

in Figure 24 only includes 3 bits "-1", "0" and "1").

In contrast to independent claims 1, 8, and 15 as currently written, Abe does not

disclose or suggest the claimed predetermined approximate figures, the predetermined

functions, the first identifier indicating a figure type of the one of the predetermined

approximate figures, and the second identifier indicating a function type of the one of the

predetermined functions to describe the data region. In Abe an approximating figure is

limited to a rectangular region. Abe also does not approximate a temporal trajectory of

corresponding representative points of successive frames with one of predetermined functions

of time. Abe only discloses extracting representative points of two frames at a start time and

an end time. In Abe the representative points of other frames between the start time and the

end time are interpolated by equation 1 on column 9. Moreover, Abe is silent about

describing an identifier indicating a type of approximating figure and predetermined function,

as now clarified in the noted claims.

In such way, applicants respectfully submit each of amended independent claims 1, 8,

and 15, and the claims dependent therefrom, clearly distinguish over the teachings in Abe.

With respect to independent claims 24, 31, and 38, and the claims dependent

therefrom, those claims clarify that a description format includes a number of representative

points (or characteristic points) and trajectory data (for example a portion from knot number

(N)3902 to a function specifying information arrangements 3913 in Figure 22 in the present

specification). Applicants note that Figure 22 only shows one trajectory data for one

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representative point (or characteristic point). However in actuality a plurality of representative points (or characteristic points) are included in the figure or object region so that the plurality of trajectory data (for example the portion from knot number (N)3902 to a function specifying information arrangement 3913) are described for the points. With such an operation the knot number (N) can be freely set for each point. Thus, the number of knots for trajectory of a point whose movement is small can be set to a small number so that an amount of data to be decreased can be reduced.

Abe does not disclose or suggest anchor information for points. In Abe coordinates of the left upper points and right lower points are recorded as anchor information (see information Abe at column 8, lines 43-45).

In such ways applicants respectfully submit the features recited in amended independent claims 24, 31, and 38, and the claims dependent therefrom, also clearly distinguish over the applied art to Abe.

In view of these foregoing comments, applicants respectfully submit each of the currently pending claims distinguishes over the applied art to Abe.

As no other issues are pending in this application, it is respectfully submitted that the

present application is now in condition for allowance, and it is hereby respectfully requested

that this case be passed to issue.

Respectfully submitted,

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